

**Amendment and Response to Restriction Requirement**

Applicant: Douglas Todd Hayden

Serial No.: 10/759,819

Filed: January 16, 2004

Docket No.: 10002614-1

Title: BUS DEVICE INSERTION AND REMOVAL SYSTEM

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**IN THE CLAIMS**

Please add new claims 31-36.

Please cancel claims 12-30.

1. (Original) A system comprising:  
a bus comprising signal lines; and  
a device configured to be inserted onto and removed from the bus through contacts configured to provide at different times during insertion and removal contact between a pre-charge circuit and one of the signal lines, and a low-impedance across the pre-charge circuit.
2. (Original) The system of claim 1, where the pre-charge circuit comprises a resistor located between one of the contacts and the device.
3. (Original) The system of claim 1, comprising a switch located between the contacts and the device.
4. (Original) The system of claim 3, where the switch is a field effect transistor located between the contacts and the device.
5. (Original) The system of claim 3, where the switch is configured to conduct after the low-impedance is provided across the pre-charge circuit.
6. (Original) The system of claim 1, comprising reference contacts configured to provide a common reference to the bus and the device before contact between the pre-charge circuit and one of the signal lines as the device is inserted onto the bus.
7. (Original) The system of claim 1, comprising power contacts and reference contacts, where the reference contacts are configured to provide a common reference to the bus and the device before the power contacts provide power, and the power contacts provide power

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before contact between the pre-charge circuit and one of the signal lines as the device is inserted onto the bus.

8. (Original) The system of claim 1, comprising power contacts and reference contacts, where the power contacts provide power before the reference contacts provide a common reference to the bus and the device, and the reference contacts provide a common reference to the bus and the device before contact between the pre-charge circuit and one of the signal lines as the device is inserted onto the bus.

9. (Original) The system of claim 1, comprising power contacts, where the power contacts are configured to provide power at the same time as contact between the pre-charge circuit and one of the signal lines, as the device is inserted onto the bus.

10. (Original) The system of claim 1, where the signal lines comprise a serial data line and a serial clock line.

11. (Original) The system of claim 1, where the bus is an inter-integrated circuit bus.

12-30. (Cancelled).

31. (New) A system, comprising:

a bus comprising signal lines;

a device configured to be inserted onto and removed from the bus through contacts configured to provide at different times during insertion and removal contact between a pre-charge circuit and one of the signal lines, and a low-impedance across the pre-charge circuit,

the contacts comprising a connector system including a first connector, a second connector, where the first connector is configured to provide a first pre-charge circuit between the second connector and a first bus signal line, and the second connector is configured to provide a first short-circuit between the second connector and the first bus signal line, where the first connector and the second connector are staggered to provide the

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first pre-charge circuit and the first short-circuit at different times during engagement and disengagement of the connector system.

32. (New) The system of claim 31, comprising:

a third connector; and

a fourth connector, where the third connector is configured to provide a second pre-charge circuit between the fourth connector and a second bus signal line, and the fourth connector is configured to provide a second short-circuit between the fourth connector and the second bus signal line, where the third connector and the fourth connector are staggered to provide the second pre-charge circuit and the second short-circuit at different times during engagement and disengagement of the connector system.

33. (New) The system of claim 32, where the first connector and the third connector are staggered to simultaneously provide the first pre-charge circuit between the second connector and the first bus signal line and the second pre-charge circuit between the fourth connector and the second bus signal line.

34. (New) The system of claim 33, where the first connector and the third connector are staggered to provide the first pre-charge circuit between the second connector and the first bus signal line and the second pre-charge circuit between the fourth connector and the second bus signal line in a sequence.

35. (New) The system of claim 33, where the second connector and the fourth connector are staggered to simultaneously provide the first short-circuit between the second connector and the first bus signal line, and the second short-circuit between the fourth connector and the second bus signal line.

36. (New) The connector system of claim 33, where the second connector and the fourth connector are staggered to provide the first short-circuit between the second connector and the first bus signal line, and the second short-circuit between the fourth connector and the second bus signal line in a sequence.